

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.

THE GARDEN CALENDAR

LIBRARY
RECEIVED

★ MAY 28 1937

U. S. Department of Agriculture

A radio discussion by W. R. Beattie, Bureau of Plant Industry, delivered in the Department of Agriculture period of the National Farm and Home Hour broadcast over a network of 48 NBC radio stations, Monday, May 3, 1937.

- - - - -

Hello Farm and Home Hour folks: I hope you are enjoying as fine a day as we are having here in Washington. Just the kind of day that makes every true gardener long to dig in the soil and plant something. Last week and the week before I talked to you about potatoes, the importance of warming the seed potatoes before planting them and also about some of the new varieties of potatoes that the Department workers have introduced recently. Today I want to tell you something about another important truck crop and the methods that are being followed in its improvement.

No doubt many of you have seen the advertisements of "frost-proof" cabbage plants and have wondered what they are. Is this some new brand of cabbage plants that are not injured by freezing. "Frost-proof" cabbage plants are merely the plants of ordinary varieties of cabbage like Jersey Wakefield, Charleston Wakefield, All Seasons and Copenhagen that are grown in the open in Georgia and other Southern States and so are well seasoned to outdoor conditions, but there is a little joker in this cabbage plant matter for as our Department workers and some of the scientists in the State Colleges and Experiment Stations have discovered there is grave danger that too much exposure to frost and cold will cause the plants to throw up seed stalks without forming true heads.

Cabbage, as you know, is a biennial, that is it produces its seed normally the second season. It requires a rest period with considerable cold to bring about the changes that cause it to form seedstalks. If kept at a temperature of about 70 degrees cabbage apparently never will go to seed, but expose either the heads or even the large plants to continued low temperatures around freezing, then let the weather warm up for a while and those seedstalks and flower stems will appear. Turnips act the same way and you know how quickly an old turnip patch that is left over winter will send up seed shoots and blossom when the weather gets warm in the spring.

Now, as a result of the investigations of the Department and State workers, it has been definitely established that continued exposure of cabbage plants to temperatures down near the frost line will cause many of them to go to seed prematurely and fail to form heads. The same is true of celery plants and while celery is a cool season crop the plants should be grown at a temperature around 60 to 70 degrees and never exposed for any length of time to temperatures down around 38 or 40 degrees.

Now a little more about cabbage. No doubt many of you have had the experience of seeing your cabbage plants, either in your garden or in the field, start off all right then suddenly the lower leaves would begin to turn yellow and droop. Finally all of the leaves would droop and wither

away leaving a brown but very small head that was worthless. That is the disease known as "cabbage yellows" and the "yellows" disease lives year after year in the soil. In other words the soil becomes what is termed "yellows sick," and the ordinary commercial varieties such as I mentioned a couple of minutes ago simply will not make a crop on sick land.

Several years ago Dr. J. C. Walker of the Wisconsin Station was made an agent of the Horticultural branch of the Department service and he set about to develop strains and varieties of cabbage that would be immune to the dread yellows disease. As a result we now have about 8 varieties that can be grown safely on yellows sick land. Like anything else involving the control of diseases the first step was to establish the cause and make a study of how the disease worked. In other words to get at its life history or cycle. Dr. Walker found that in the fields of commercial varieties of cabbage where the losses were heavy that there were certain occasional heads that did not go down with the disease. By using these as sources of seed and replanting on yellows-sick soil in the course of time he built up strains that were almost 100 percent immune to the disease. After these were carefully proven small quantities of seed were placed in the hands of seed growers so as to increase the supply. At present practically every seedsman lists certain of these resistant varieties and some of the seed catalogs list as many as five or six of the immunized varieties. Of course this work of selection must be continued or the immune varieties will soon drift back into susceptible strains.

If you are interested in knowing more about this cabbage breeding and selection work send for a copy of Farmers' Bulletin No. 1439 on the Diseases of Cabbage and Related Plants. The results of this work have been accepted by the State workers and are made a part in the recommendations to growers.